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March 29, 2010

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street S.W.
Washington DC 20554

**Re: WT Docket No. 07-293; ID Docket No. 95-91;
GEN Docket No. 90-357; RM-8610
Ex Parte Statement**

Dear Ms. Dortch:

This is to report that Friday, March 26, Giselle Creeser, Lockheed Martin Corporation; Joseph Cramer, The Boeing Company; Daniel G. Jablonski, Ph.D., Johns Hopkins University Applied Physics Lab, Chip Yorkgitis, Kelley Drye & Warren, LLP; Danny Hankins, Textron (by phone); and the undersigned, counsel for Aerospace and Flight Test Radio Coordinating Council ("AFTRCC"), met with Julius P. Knapp, Chief, Office of Engineering and Technology; Ron Repasi, Deputy Chief, Office of Engineering & Technology; Thomas Derenge, Deputy Chief, Mobility Division, Wireless Telecommunications Bureau; Patrick Forster, Senior Engineer, Policy Division, Office of Engineering and Technology; Moslem Sawez, Technical Advisor, Mobility Division, Wireless Telecommunications Bureau; Linda Chang, Associate Chief, Policy & Rules Branch, Commercial Wireless Division, Wireless Telecommunications Bureau; and John Kennedy, Office of Engineering and Technology; regarding AFTRCC's position in the above-referenced proceedings.

The AFTRCC representatives explained the basics of flight test operations, the importance of interference-free telemetry to pilot safety, and the need for technical solutions to the risk of interference from adjacent band Wireless Communications Service ("WCS") operators. The representatives addressed aeronautical mobile telemetry antenna sites and the protection requirements therefor. They urged that coordination with potentially numerous WCS base stations was not a workable solution absent frequency separation, superior filtering and other measures as referenced in the attached materials exchanged at the meeting.

Ms. Marlene H. Dortch
March 29, 2010
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A copy of this ex parte notification is being filed electronically for inclusion in the referenced Dockets.

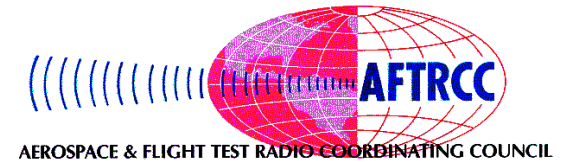
Sincerely,

A handwritten signature in black ink, appearing to read "William K. Keane", with a long, sweeping horizontal stroke extending to the right.

William K. Keane

*Counsel for Aerospace and Flight Test
Radio Coordinating Council*

cc: Julius Knapp
Ron Repasi
Patrick Foster
Moselm Sawez
Tom Derenge
Linda Chang
John Kennedy



Aerospace and Flight Test Radio Coordinating Council (AFTRCC)

"Impact to Flight Test Safety of WCS Proposals "

Presentation in
WT Docket No. 07-293 and
IB Docket No. 95-91

Aerospace and Flight Test Radio Coordinating Council Members



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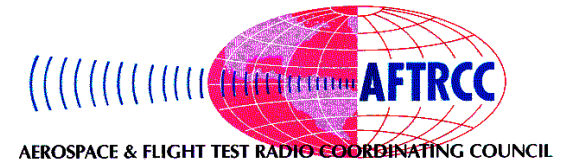
Bechtel Nevada



L3 Telemetry East



Role of Flight Test Telemetry



- Flight test telemetry channels provide real-time safety link between aircraft under test and ground engineers.
- Via telemetry, engineers are able to monitor the condition of the aircraft during its maneuvers, and warn the pilot to abort in the event trouble is detected. It is vital for aviation safety.
- If aircraft lost, real-time telemetry enables engineers to analyze the final moments of flight, and determine the cause of the failure.



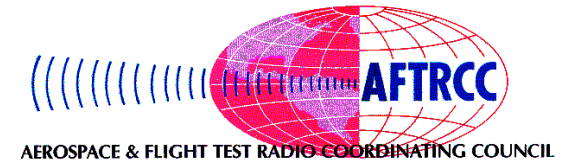
Airplane Damaged During Flutter Test Lands Safely at Boeing Field

WCS Proposals Will Adversely Impact Flight Testing



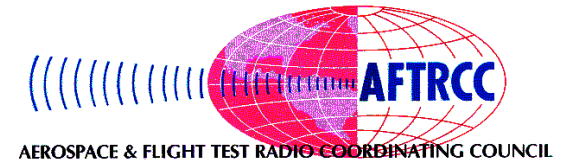
- WCS wants power measured on an average basis, not peak as required by Rule 27.50(a), with a peak-to-average ratio of 13 dB
- Measuring WCS power on an average basis -- much less allowing a peak-to-average ratio of 13 dB (or greater in the case of LTE) -- will significantly increase OOB into 2360-2370 MHz.
- Effectively relaxes the OOB limit from $43 + 10 \log(P)$ to only $30 + 10 \log(P)$.
- Field tests of WCS devices have confirmed the interference threat.

WCS Proposals Will Adversely Impact Flight Testing (cont.)



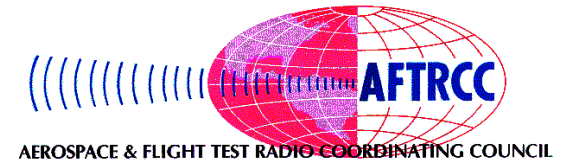
- If protection levels are defined in terms of average, rather than peak, power, an additional 8 dB of interference is to be expected once every second. For a WCS transmitter operating within line-of-sight of an AMT ground station antenna at the limits of “average” interference, 500 contiguous bits of AMT data will be lost once every second.
- Depending on duration of interference event, loss of bit sync will lead to link failure. Since it takes tens of seconds or more to reacquire a telemetry link once antenna track is lost, WCS interference will severely impact link availability.
- Loss of flight test data leads to requirement for re-flight of test points (not possible with missiles) in order to meet mandatory program milestones.

WCS Proposals Will Adversely Impact Flight Testing (cont.)



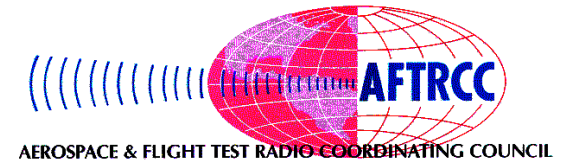
- Greatly increased risk of telemetry drop-outs, reduces reliable airspace operating area by 51 percent.
- Aircraft are routinely required to operate out to maximum range from AMT ground stations in order to cope with FAA restrictions, weather conditions, local air traffic congestion, etc. That essential flexibility will be lost.
- Mission re-flights increase risk. Mission re-flights increase costs. Mission re-flights cause delivery delays, and reduce global competitiveness.
- Commission and U.S. have repeatedly recognized need for protection of flight test spectrum

WCS Proposals Will Adversely Impact Flight Testing (cont.)



- The WCS parties and affiliates opposed average power measurement when WCS Wireless LLC sought a waiver just three years ago incident to a prospective merger with XM Satellite Radio arguing the “potential for interference to immediately adjacent WCS licensees.” Opposition to Amended Request for Waiver filed July 5, 2005 in ULS File No. 0002109551 as quoted in AFTRCC ex parte of May 7, 2008 at 3 (emphasis in original).
- AT&T has argued in WT Docket No. 07-195 that there should be a 10 MHz guard band, and tightened OOB to protect its operations at 2110-2155 MHz (AWS-1) from any adjacent interference from 2155-2180 MHz band (AWS-3). Citations in AFTRCC ex parte of August 18, 2008.

AFTRCC Proposals Enhance Spectral Usage and Aviation Safety



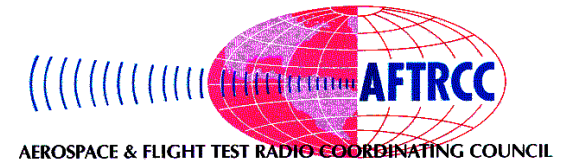
- Limit use of upper bands to base stations only (FDD)
- Retain peak power measurement consistent with existing Rule 27.50(a) and various other wireless services (1390-1392; 1390-1392/1432-1435 MHz; and 1670-1675 MHz; see Rules 27.50(e)-(f))
- With peak power, increase existing protection levels from $43 + 10 \log (P)$ in 2360 – 2370 MHz to $70 + 10 \log (P)$ measured on an EIRP basis (i.e. after transmit antenna) at band edge and above
- Coordination required to maintain protection as against close-in base stations
- Require transmit power control ("TPC") for WCS base stations, mobiles and portables

AFTRCC Proposal Enhances Spectral Usage and Aviation Safety



- As alternative , create guard band of at least 2.5 MHz starting at 2357.5 MHz together with base station filtering and TPC to yield OOB levels specified above (or tighter if average power used). Line-of-sight exclusion zones required in combination with above.
- Coordination, by itself, for each AMT site and for the many WCS base stations, *unmanageable* for all concerned.
- Coordination for any operation within LOS, *if coupled with technical solutions*, possible . Track Rule 25.253(f)(2).

AFTRCC Proposal Enhances Spectral Usage and Aviation Safety (cont.)



- Benefits
 - Enables achievement of mobile broadband use per the National Broadband Plan, “while protecting neighboring federal, non-federal Aeronautical Mobile Telemetry (AMT) and satellite radio operations” -- *as the Plan requires. Id.* at 75.
 - Deals with interference at the source, where it is most readily prevented.
 - Minimizes enforcement/regulatory burdens for Commission.

* * *